

REMARKS/ARGUMENTS

At present, claims 1, 4-7, 9-16, 18-25 and 29 are pending in the application and currently stand rejected. Based on the following remarks and forgoing amendments, reconsideration of the application is respectfully requested.

In the Specification

On page 2 of the Office Action, the Examiner objected to the specification for containing an embedded hyperlink and/or other form of browser executable code. By this response, the embedded hyperlink has been converted to straight text indicating the source of the listed reports.

Objections to the Claims

Also on page 2 of the Office Action, the Examiner objected to claim 16 as failing to further limit the subject matter of the claim from which it depends. The Examiner also objects to claim 29 as being an apparatus claim dependent upon a method claim. By this response, claims 16 and 29 have been cancelled.

§112 Rejections

Claims 1, 4-7, 9-16, 18-25 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, the Examiner argues that the language “verifying the signed container control certificate by a corresponding function implemented in the electronic seal, wherein the container control certificate is stored in the log if the verification succeeds and if the verification fails, the container control certificate is not stored in the log” is vague and indefinite. The Applicant respectfully disagrees. Claim 1 describes storing the container control certificate in the log for verification purposes and, if verification fails, the container control certificate is not further stored. The Examiner correctly suggests that the claim could be read as storing the container control certificate in the log and if verification fails, the container control certificate is not stored in the log.

The Applicant respectfully submits that Examiners are required to focus during examination of claims for compliance with the requirement for definiteness upon “whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available.” (M.P.E.P. §2173.02). The Board of Patent Appeals and Interferences (BPAI) has stated that in rejecting a claim under the second paragraph of 35 U.S.C. §112, it is incumbent upon the Examiner to establish that one of ordinary skill in the pertinent art, when reading the claim in light of the supporting specification, would not have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims. *Ex parte Wu*, 10 USPQ 2d 2031, 2033 (BPAI 1989). The test for definiteness under 35 U.S.C. §112, second paragraph is whether “those skilled in the art would understand what is claimed when read in light of the specification. *Orthokinetics, Inc., v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). In the present case, one of ordinary skill in the art would understand when reading the claim in light of the specification, that the container control certificate is initially stored, verified and, if verification fails, not further stored. The Applicant respectfully submits that there are no internal inconsistencies in the identified language.

The Examiner also notes that claim 1 recites the limitations “associated with a first entity” and suggests that the phrase should be interpreted as “the first entity”. Given that the preamble provides antecedent basis for the term “first entity” the Applicant has amended claim 1 to change the phrase “associated with a first entity” to the phrase “associated with the first entity”. The Applicant would like to thank the Examiner for pointing out the typographical error in the claim.

The Examiner rejects claim 9 for including a phrase that is vague and indefinite. More specifically the Examiner argues that the phrase “data expected to be received” is vague can refer to data received and data not received. By this response, the language “expected to be” has been deleted from claim 9.

Claim 19 is rejected for including a phrase lacking proper antecedent basis. The Examiner observed that the phrase “the signed location data” lacks antecedent basis. By this response, claim 19 has been amended to now properly depend from claim 18. Claim 19 was

further amended to describe the location data as being digitally signed by the associated entity and stored in the log of the seal.

Claim 20 is also rejected for containing a phrase lacking proper antecedent basis. More specifically, the Examiner noted that the phrase “the signed location data” lacks proper antecedent basis. By this response, claim 20 has been amended now depends from claim 18, and to replace the phrase “the signed location data” with the phrase “location data digitally signed by the associated entity”. The Applicant respectfully submits that claim 18 provides proper antecedent bases for the phrase as amended. Claim 20 has also been amended to replace the phrase “a corresponding function” with the phrase “the corresponding function”.

Claim 23 is rejected for including a phrase that the Examiner considers vague and indefinite. More specifically, the Examiner argues that the phrase “recording the location data in the log of the electronic seal is subject to a result of the signature verification process” is vague and indefinite. By this response, claim 23 has been amended to replace the phrase “the signature verification process” with the phrase “verifying the signed container control certificate”. The Applicant respectfully submits that claim 23 now more particularly points out and distinctly claims the subject which the Applicant regards as the invention.

In claim 25, the Examiner notes that the phrase “a second entity” should read “the second entity”. The Applicant would like to thank the Examiner for pointing out the minor typographical error in the claim. By this response, claim 25 has been amended to adopt the language proposed by the Examiner.

The Examiner also rejects claim 29 as including a phase lacking proper antecedent basis. By this response, claim 29 has been cancelled.

§103 Rejections

Claims 1, 4-7, 9-16, 18-25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girault et al. (US 5,768,379), in view of Arnold (US 6,456,716), and further in view of Boman et al. (US 7,564,350). This rejection is respectfully traversed.

The Applicant respectfully submits that the claims are patently defined over the prior art. As discussed previously, claim 1 is directed to a method for documenting a transfer of authority of control for a container from a first entity of a transportation chain to a second entity of the transportation chain. The method includes receiving through an interface of an electronic seal associated with the container an electronic container control certificate associated with a first entity. The electronic seal includes a log for recording data and a control unit for verifying data received through the interface. The electronic container control certificate comprises a cryptographic key associated to the second entity, and which container control certificate is digitally signed by the first entity. The method further includes receiving in the electronic seal associated with the container, geographic location data from a location recording device associated with one of the first and second entities, storing the container control certificate in the log of the electronic seal, and verifying the signed container control certificate by a corresponding function implemented in the electronic seal.

In rejecting claim 1, the Examiner relies upon Girault et al., directed to a system for checking limited access to authorized time slots renewable by means of a portable storage device. The system is described as being employed to control access to building and/or post office boxes. Access is controlled by reading data from a key card. The key card includes a data element pertaining to a particular time slot having a signature. Readers capable of verifying the signature provide access to a guarded location. Initially, it should be noted that Girault et al. does not pertain to protecting articles in a transportation chain let alone an electronic seal for a container. In addition, Girault et al. does not teach transferring a container control certificate including a cryptographic key to an electronic seal for a container. At best, Girault et al. teaches storing a data element having a particular signature on a key card that is later read by a reader to provide access to a control point. Girault et al. fails to teach any of the limitations recited in claim 1. For example, Girault et al. does not teach receiving in an electronic seal a control certificate associated with a first entity, let alone the particular form of control certificate claimed.

The Examiner relies upon Arnold for teaching the particular type of container control certificate. As noted in the previous response, Arnold does not teach transferring a container control certificate including a cryptographic key to an electronic seal for a container. Arnold

simply teaches reading and decrypting a certificate. The Applicant respectfully submits that the combined teachings of Girault et al. and Arnold would, at best, teach a key card including a cryptographic data element stored as a digital certificate, and a lock capable of reading and decrypting the digital certificate. The references when taken singly and or in combination, do not teach a container seal as described in claim 1.

Girault et al. also fails to teach receiving in the electronic seal associated with the container geographic location data from a location recording device associated with one of the first and second entities as described in claim 1. In order to teach this missing claim limitation, the Examiner relies upon Boman which includes a tracking system for tracking a geographic location of a container. The Applicant respectfully submits that there is no rational basis for providing the key card/reader system described in Girault et al. which provides access to buildings, with the capability of receiving geographic location data. Buildings, post office boxes and the like, are stationary objects having fixed locations. The fixed locations do not move and thus there is no need to track geographically. In order to support a rejection under 35 U.S.C. §103, an Examiner must provide an articulated rationale with some rational underpinning. Regardless of the teaching in Boman, there is simply no rational basis to support adding a geographic location data receiving capability to a building or other fixed structure/element.

In addition to the above, the Applicant respectfully submits that none of the prior art references, when taken singly and/or in combination teaches that the cryptographic key includes identification data associated with a container. The prior art, when taken singly and/or in combination also fails to teach that the container control certificate is stored in the log if the verification succeeds as presented, or the converse, if the verification fails, the container control certificate is not stored in the log. The Application respectfully submits that the present invention is patentably defined over the prior art of record. The Applicant further submits that the amendments to the claims were made to address the §112, second paragraph rejections, not to overcome the current art of record.

Based on the above remarks and the amendments to the claims, the Applicant respectfully submits that the present invention is patentably defined over the prior art of record such that allowance of all claims and passage of the application to issue is respectfully requested. If the

Examiner should have any additional questions or concerns regarding this matter, he is cordially invited to contact the undersigned at the number below in order to further prosecution.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-0510.

Respectfully submitted,
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